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## U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

SUBMISSION OF FORMA	Docket Number: 395/35	Batch No. G78	#23	
Application Number 09/510,562	Examiner D. Saunders	Art Unit 1644		
Title METHOD FOR SCREENING FO INHIBITORS AND ACTIVATOR		Inventor(s) Gerard M. HOU	JSEY	

Assistant Commissioner for Patents
Washington D.C. 20231

SIR:

Applicant refers to the Notice of Draftsperson's Patent Drawing Review attached to Paper Number 11 in the above-referenced patent application and submits herewith twenty two (22) sheets of formal drawings to be substituted for the drawings which were previously submitted in the application. Of the 22 sheets, five (5) sheets are photographs.

The Commissioner is hereby authorized to charge any fees which may be required in connection with this communication to Deposit Account No. 11-0600.

Dated:

June 6, 2001

By?

awrence P. Casson, Reg. No. 46,606

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FIG. 1.A. - 1

Ser	AGC				GGG			GAA	٠.	
Glu	GAG				GCT			GAA TTC		
Gly	GGC				CCC			CGC CTC		
Gly Glu	GAG	*	130		ccc	*	70		*	10
Glu	GAG				AGT CCC			TCC		
Ser	AGC							GGG		
Thr	ACG	*	140		CGC	, <b>*</b>	80	CTT	*	20
Val	GTG				GCG			ACA		
Arg	CGC				CGC			GCC		
Phe	TTC	*	150		AAG	*	90	CGC	*	30
Ala	GCC		0	Met	ATG		O	GGT		J
Arg	CGC			Met Ala	GCT			222		
Lys	AAA			Asp Pro	GAC		L-3	GCC		
Gly Pro	GGG	*	160	Pro	CCG	*	100	GCC	*	40
Pro	ccc			Ala	GCT			CCG		
Leu	CTC			Ala	GCG			GGG		
Leu Arg Gln Lys Asn	CGG	*	170	Ala Gly	GCG GGG	*	110	CCG	*	50
Gln	CAG			Pro	CCG					
Lys	AAG			Pro	cce cce cce			CCA CCT CTC		
Asn	AAC	*	180	Pro	CCG	*	120	CTC	*	60
			O							J

12.

GTG Val CAC GAG Glu Val 190 GTG Lys AAG AAC Asn His CAC 200 Lys AAA TTC Phe ACC GCC CGC TTC TTC AAG CAG CCC Thr Ala 210 Arg Phe 220 Phe Lys Gln Pro 230 Thr ACC TTC TGC 240

AGC CAC Cys Thr Asp Phe TGC ACC 250 GAC TTC ATT Ile 260 TGG Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys GGC TTC GGG AAG CAG GGA TTC CAG 270 280 TGT 290 CAA GTC Gln Val TGC 300

Cys TGC Phe TTTVal GTT GTA CAC AAG 310 Val His Lys Arg CGC TGC CAT GAA TTC GTC ACG TTC 320 Cys His Glu Phe Val Thr Phe 330 TCC Ser Cys Pro Gly Ala TGC CCT GGT GCA GAC Asp

340

350

360

AAG Lys Gly Pro GGC CCG GCC TCT 370 Ala Ser GAT Asp Asp Pro Arg GAC 380 CCA CGG AGC AAA CAC AAG TTT Ser Lys His 390 Lys Phe Lys 400 AAG ATC Ile CAC His 410 Thr ACC TAC TCC 420

AGC CCT ACC TTC Pro Thr Phe Cys Asp His Cys Gly 430 TGT GAC CAC 440 TGT GGA TCA CTG Ser Leu Leu Tyr Gly 450 CTG TAT GGG CTC ATC CAC CAG GGG 460 Leu Ile His Gln Gly 470 ATG 480

AAA TGC Cys Asp Thr Cys Met GAC ACC 490 TGTATG ATG AAT GTC CAC AAG Met 500 Asn Val His Lys Arg Cys Val Met Asn Val Pro 510 CGC TGC GTG 520 ATG AAC  $\operatorname{GTC}$ CCC AGC Ser Leu CTC

530

540

Lys

Cys	TGT		***	
Gly	GGC			•
Thr	ACC			( D
Asp	GAC	*		550
His	CAC			
Thr	ACA			
Cys Gly Thr Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln	TGT GGC ACC GAC CACA GAA CGC CGT GGC CGC ATC TAC ATC CAG	*		560
Arg	CGC			
Arg	CGT			
Gly	GGC	*		570
Arg	CGC			
Ile	ATC			
Tyr	TAC			ഗ
Ile.	ATC	*		580
Gln	CAG	)		
Ala	GCC CAC	) ) )		
His	CAC	;	*	590
Ile	AIC GAC	) E		
Ala His Ile Asp Arg				
Arg	. 50	ָה. ביי	*	600

Glu Val Leu Ile Val Val Arg Asp Ala Lys Asn Leu Val Pro	GAG GTC CTC ATC GTT GTA AGA GAT GCT AAA AAT CTG GTA CCT			
Leu	CTC			0
Ile	ATC	*		610
Val	GTT			
Val	GTT			
Val	GTA	*		620
Arg	AGA			
Asp	GAT			
Ala	GCT	×	+	630
Lys	AAA			J
Asn	AAT			
Leu	CTG			0
Val	GTA		*	640
Pro				
Met	ATG	, 3		
Asp	GAC	) 3	*	650
Pro		) )		
Met Asp Pro Asn Gly		7 7 7		
Gly	(	333	*	660

Ţ,	T]			
Leu S	rg 1			
er	CA			
Asp	GAT			0
Pro	ccc	*		670
Туг	TAC			
Val	GTA			
Lys	AAA	*		680
Leu	CTG			
Lys	AAA			
Leu	CTG	*		690
Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys	TTG TCA GAT CCC TAC GTA AAA CTG AAA CTG ATC			Ü
Pro	CCT			
Asp	GAT			~1
Pro	CCC	; ; }	*	700
	AAA	,		
Ser	AGI	E S		
Glu	GAG	2 2	*	710
Ser Glu Ser	500	J. C.		
Lys	CCT GAT CCC AAA AGI GAG AGG	AAG		
r Lys Gin		CAG	*	720

ŗ,	AΑ		. 5
ZS I	4 D		
hr	22		
Lys	AAG	•	
Lys Thr Lys Thr Ile Lys Cys Ser Leu Asn Pro Glu Trp Asn Glu	AAG ACC AAG ACT ATC AAA TGC TCC CTC AAC CCG GAG TGG AAC GAA	*	730
11e	ATC		
Lys	AAA		
Cys	TGC	*	740
Ser	TCC		
Leu	CTC		
Asn	AAC	*	750
Pro	CCG		
Glu	GAG		
Trp	TGG		7
Asn	AAC	*	760
Glu	GAA		
Thr	ACC		
Phe	TTC	*	770
Arg	AGA		
Thr Phe Arg Phe Gln	ACC TTC AGA TTT CAG		
Gln	CAG	) ) ) *	780

Leu Lys Glu Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp	CTG AAG GAA TCA GAC AAA GAC AGA AGA CTG TCC		
Lys	AAG		
Glu	GAA		-1
Ser	TCA	*	790
Asp	GAC		
Lys	AAA		
Asp	GAC	*	800
Arg	AGA		
Arg	AGA		
Leu	CTG	*	810
Ser	TCC		
Val	GTA		
Glu	GTA GAG		œ
Ile	ATC TGG	*	820
Trp	TGG		
Asp	GAT TGG		
Trp	TGG	*	830
Asp	GAC		
Asp Trp Asp Leu	CTG	) 3 3	
Thr	ALL	) ) *	840

Ser	AGC		
Arg	AGG		
Asr	AAT		
Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu	AGC AGG AAT GAC TTC ATG GGA TCT CTG TCG TTT GGG ATT TCA GAA	*-	850
Phe	TTC		
Met	ATG		
Gly	GGA	*	860
Ser	TCT		
Leu	CTG	•	
Ser	TCG	*	870
Phe	TTT		J
Gly	GGG		
Ile	ATT		æ
Ser	TCA	*	880
Glu	GAA		
Leu	CTA		
Gln	CAG	*	890
Lys	AAA	i i	
Ala	CTA CAG AAA GUU GGA	2	
Leu Gln Lys Ala Gly	GGA	) } *	900

THE PARTY OF GTG GAT GGC TGG 910 Phe Lys Leu Leu Ser Gln Glu Glu Gly Glu Tyr Phe Asn Val Pro TTC AAG TTA CTA AGC CAG GAA GAA GGC GAG TAC TTT 920 930 940 AAT GTG 950 CCG ĠTG Val 960

Val

Asp Gly Trp

CCG Pro Pro Glu Glu Ser Glu Gly Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys CCG GAA GAA AGC GAG GGC AAT GAA GAG CTG CGG CAG AAG TTT GAG AGA GCC AAG 970 980 990 1000 1010 ATT 1020

GGC CAA GGT ACC AAG GCT CCA GAA GAA AAG ACA GCG Gln Gly Thr Lys Ala Pro Glu Glu Lys Thr Ala 1030 1040 1050 Asn Thr Ile AAC ACT 1060 ATA TCC Ser Lys Phe 1070 AAA TTT GAC Asp AAC 1080

Gly

	►.		_	0		A	А	,
Lys	AAG		Gly	GGC		Asn	AAT	
Ile	ATC		Ser	AGC		Gly	GGC	``
	CTG	$\vdash$		AGC TTT	<u> </u>	Asn Arg	AAC	10
Leu Lys	* AAG	1210	Gly	* GGC	1150	Arg	* AGG	1090
Lys	AAA		Lys	AAG		Asp	GAC	
Asp	GAT		Phe Gly Lys Val	GTC		Arg	CGG	Li
val	· GTG	1220	Met	* ATG	1160		* ATG	1100
. Val	GTG		Leu	CTC		Met Lys	AAA	,
Ile	ATC		Ser	TCA			CTG	
: Gln	caa	1230	Glu	* GAG	1170	Leu Thr	* ACC	1110
Asp	GAT	0	Arg	cee	0	Asp Phe	GAT	
Asp	GAC		Lys	AAG		Phe	TTT	
Asp	GAT	<b>—</b>	Gly	GGT	$\vdash$	Asn	AAC	11
Val	*GTG	1240	Gly Thr	* ACA	1180	Phe	* TTC	1120
Glu	GAG		Asp	GAT		Leu	CTG	
Суѕ	TGC		Glu			Met	ATG	<b>–</b>
Thr	* ACA	1250	Leu	* GAA CTC	1190	Val	* GTG	1130
Met				TAT		Leu	CTG	
Val	ATG GTG		Tyr Ala	GCC		Gly	GGG	
Asp Val Glu Cys Thr Met Val Glu	* GAG	1260	Val	GTG	1200	Lys	* AAA	1140

Lys Arg Val Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln	AAG AGG GTG CTG GCC CTG CCT GGG AAG CCC CCA TTC CTG ACT CAG		
Arg	AGG		
Val	GTG		<b>—</b>
. Leu	CTG	*	1270
Ala	GCC		
Leu	CIG		<b></b> -
Pro	CCT	*	1280
Gly	GGG		
Lуs	AAG		
Pro	CCC	, *	1290
Pro	CCA		0
Phe	TTC		
Leu	CTG		<del>1</del>
Thr	ACT	*	1300
Gln	CAG		
Leu	(1)	3	
His			1310
Ser	(	ACC.	
Cys		TGC	
Leu His Ser Cys File		CHO CAM TOO TGC TIC	1320

CAG ACC ATG GAC CGC CTC TAC TTT GTG ATG GAG TAT GTG AAC GGG GGC GAC CTC ATG TAC Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr 

His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro His Ala Val Phe Tyr Ala Ala Glu Ile CAC ATC CAA CAA GTT GGC CGT TTC AAG GAG CCC CAT GCT GTA TTT TAC GCT GCA GAG ATT 

Asn	AAT			Asn	AAC			Ala	GCC		
Ile	ATC			Val	GTG			Ile	ATC	•	
Trp	TGG		ш	Met	ATG		11	Gly	GGT		1.
Asp	GAT	*	1570	Leu	CTG	*	1510	Leu	CTT	*	1450
о С1у	GGG			Asp	GAT			Phe	TTC		
Gly Vai	GTG			Ser	TCC			Phe	TTC		بـــ
Thr	ACA	*	1580		GAG	*	1520	Leu	TTG	*	460
Thr	ACC			Glu Gly	GGG			Gln	CAG		
Lys	: AAG			His	CAC				AGC		
Thr	ACA	*	1590	I1e	ATC	*	1530	Ser Lys	AAG	*	1470
Phe	TTC		0	Lys	AAA		Ö	Gly	GGC		Ü
Cys	TGT			Ile	ATC			Ile	ATC		
Gly	GGC	•	<b></b> -	Ala	GCT		1.5	Ile	ATT		14
Thr	ACT	*	1600	Asp	GAC	*	1540	Tyr	TAC	*	1480
Pro	CCA			Phe	TTT			Arg	CGT		
					GGC			Asp	GAC		L
Asp Tyr	GAC TAC	*	1610	Gly Met	ATG	*	1550	Leu	CTG	*	1490
	ATT			Cys				Lys	AAA		
Ala	, ecc			Lys	TGT AAA			Leu	CTT		
Ile Ala Pro	CCA	*	1620	G1u	GAG		1560	Asp	GAC	*	1500

Gln	CAG		Leu	CTG		Glu	GAG	e -
Ser	TCA		Туг	TAT		Ile	ATC	
Ile	ATC	H.	Glu Met	GAA	16	Ile	ATT	16
Met	* ATG	1750	Met	* ATG	1690	Ala	*	1630
Glu	GAG		Leu	TTG		Туг	TAT	
His	CAC		Ala	GCT	u	Gln Pro	CAG	<b>—</b>
Asn	* AAC	1760	Ala Gly Gln	* GGC	1700	Pro	*	1640
Val	GTG			CAG		Tyr	TAC	
Ala	GCG		Ala	GCA		Gly	GGA	
Туг	* TAT	1770	Pro	CCT *	1710	Tyr Gly Lys Ser	* AAG	1650
Pro	ccc	0	Phe	TTT	Ü		TCT	
Lys			Glu	GAA		Val	GTG	
	AAG TCC	<del>Ľ</del> ,	Gly Glu	GGG	17	Asp	GAC	1660
Ser Met	* ATG	1780		* GAG	1720	Trp	* TGG	60
Ser	TCT		Asp	GAT		Trp	TGG	
	AAG		Glu	GAG		Ala	GCG	1
Glu	* GAA	1790	Asp	* GAT	1730	Phe	TTT	1670
Ala	* GAA GCT	·	Glu.	GAA		Gly Val	GGA GTC	
Lys Glu Ala Val Ala	GTG		Asp Glu Leu Phe	CTC			GTC	
Ala	*GCA	1800	Phe	TTC	1740	Leu	CTG *	1680

FIG. 1.A. - 11

								` •
Lys	AAG		Glu	GAA		Ile	ATC	
G1u	GAG		Arg	CGA		Cys	GC .	
Ile	ATT	<b>⊢</b>	Asp	GAC	18	Lys	AAA	18
Gln	* CAG	1930	I1e	* ATT	1870	Gly	* GGG	1810
Pro	CCA			AAG		Leu	CTA	
Pro	CCT		Lys Glu	GAG		Met	ATG	
Туг	* TAT	1940	His	* CAT	1880		ACC *	1820
: Lys	AAA		Ala	GCA		Thr Lys	AAA	
Pro	CCA		Phe	TTT		His	CAC	
Lys		1950	Phe	TTC *	1890	Pro	¢CA	1830
	AAA GCT	0	Arg	CGG	0	G1y	GGC	
Ala Arg	AGA		Tyr	TAT		Lys	AAG	
	GAC	⊣	Ile	ATC	11	Arg	cgc	18
Asp Lys	* AAG	1960	Asp	* GAC	1900	Leu	*CTG	1840
Arg	CGA		Trp	TGG		Gly	GGT	
	GAC		G1u			Cys	TGT	<u> </u>
Asp Thr	* ACC	1970	Lys	* GAG AAA	1910	Gly	* GGG	1850
	TCC		Leu	CTC		Pro	CCT	
Ser Asn	AAC		Leu Glu	GAA		Glu	GAA	
Phe	TTC *	1980	Arg	CGC *	1920	Gly	GGG *	1860

GAC AAA GAG TTC ACC AGG CAG CCT GTG GAA CTG ACT CCC ACT GAC AAA CTC TTC ATC ATG Asp Lys Glu Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile Met

AAC TTG GAC CAA AAT GAA TTT GCT GGC TTC TCG TAT ACT AAC CCA GAG TTT GTC ATT Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro Glu Phe Val Ile AAT Asn 

GTG TAG GTG AAT GCA GAT TCC ATC GCT GAG CCT GTG TGT AAG GCT GCA GCG TGA ATG TCT 

Val

FIG. A.1. - 13

ATT ATC AAT TCC		they are y
AAT T	*	2170
CC		0.
AGT		
CTT		2
CCA	*	2180
GGA		•
TTC		
ATG	*	2190
C AGT CTT CCA GGA TTC ATG GTG (		J
CCT		
CTG TTG GCA		22
TTG	*	2200
GCA		
TCC		
GTC	*	2210
ATG TGG		
TGG		
AGA	*	2220

GCT		
TGT		
CTT		22
T CTT AGA GGG	*	2230
GGG		
CTT		N) ·
TTC	*	2240
TTT GTA		
GTA		
TGT ATA	*	2250
ATA		
GCT		•
TGC		22
TAG	*	2260
TTT		
GTT		8
TTC	*	2270
TAC		
ATT		
TCA	*	2280

AAA		
TGT		
TTA		2
AAA TGT TTA GTT	*	2290
TAG		
AAT		
T TAG AAT AAG	*	2300
$\mathtt{TGC}$		
G TGC ATT GCC		
GCC	*	2310
CAC		
TGA		
A TAG AGG TAC		2320
AGG	*	20
TAC		
AAT TTT		2
TTT	*	2330
CCA GAC		
TTC	*	2340

CAG AAA CTC		134 de 2
AAA		
CTC		2
ATC	*	2350
CAA		
TGA		
C ATC CAA TGA ACC	*	2360
AAC		
C AAC AGT G		
GTC	*	2370
AAA		J
ACT		
GTC AAA ACT TAA CTG TGT		23
CTG	*	2380
TGT		
CCG		6)
ATA	*	2390
CCA		
CCG ATA CCA AAA TGC	٠.	
TGC	<b>.</b> *	2400
		_

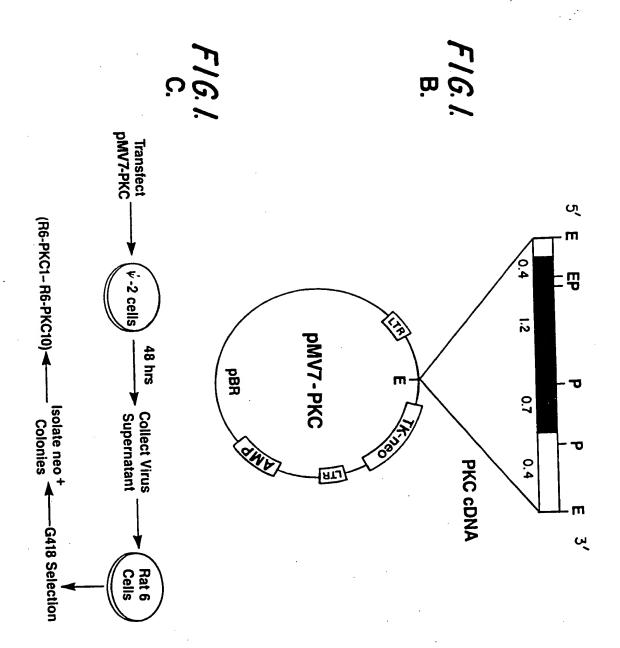
TTC		
AGT		
ATT		24
TGT	*	2410
AAT		
TTC AGT ATT TGT AAT TTT		N
TAA	*	2420
TAA AGT		
CAG		
ATG	*	2430
CIG		_
ATG		
TTC		24
CTG	*	2440
GTC		
AAA GTT	4	٠ 2
GTT	*	2450
TTT ACA		
ACA		
GTT	*	2460

ACT		
ACT CTC		
GAA		2,
GAA TAT CTC	*	2470
CTC		
CT		N
T TGA ATG CTA CCT AAG CAT	*	2480
ATG		
CTA		
CCT	*	2490
AAG		
CAT		
GAC		2500
CGG TAT	*	00
TTT TAA AAG		2
TAA	*	2510
AAG		
TTG		
TGA	*	2520

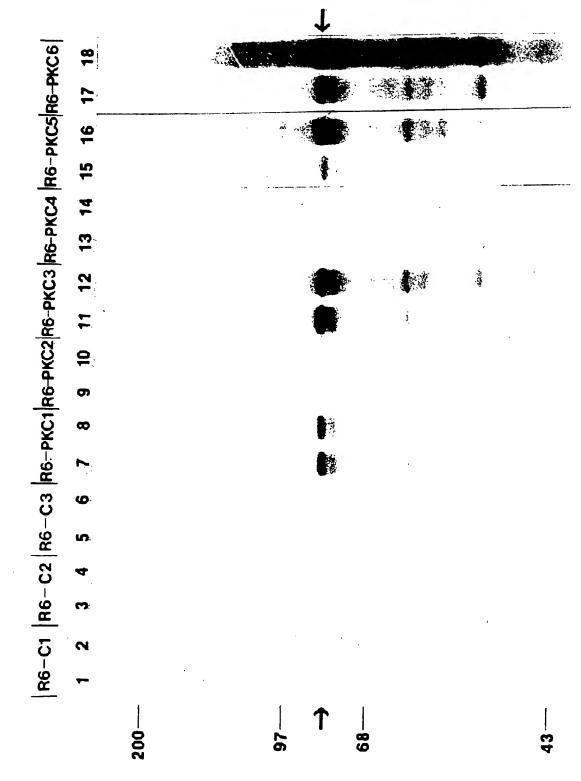
FIG. 1.A. - 15

;			3,8
THE THE COLUMN TO THE ACT GIG AAC TOT TOT CIC TIG GAG GAA CIT			
3		2530	ed ki
<b>EC P</b>	*	30	
U de L			
ACT		N	
GTG	*	2540	
AAC			
TCT			
TGT	*	2550	
CIC			
TTG			
GAG	,	2560	)
GAA	*	60	)
CTT			
LTT		,	s
GT.1	*	,	2570
MAT	3		
GAA	<b>S</b> .		
TAA GAA 110	10. *		2580

2590 2600 \* \* GTA TGA TTA AAC TGA ATT C\*



FG. 2



## FIG. 3

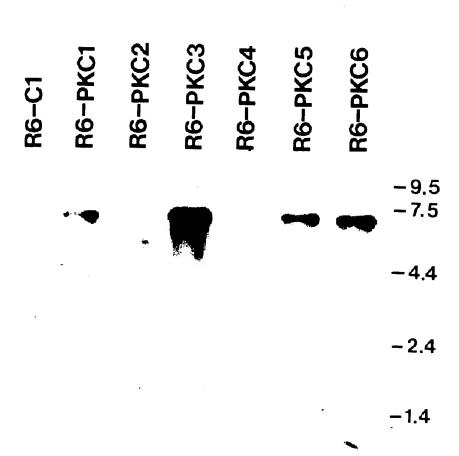
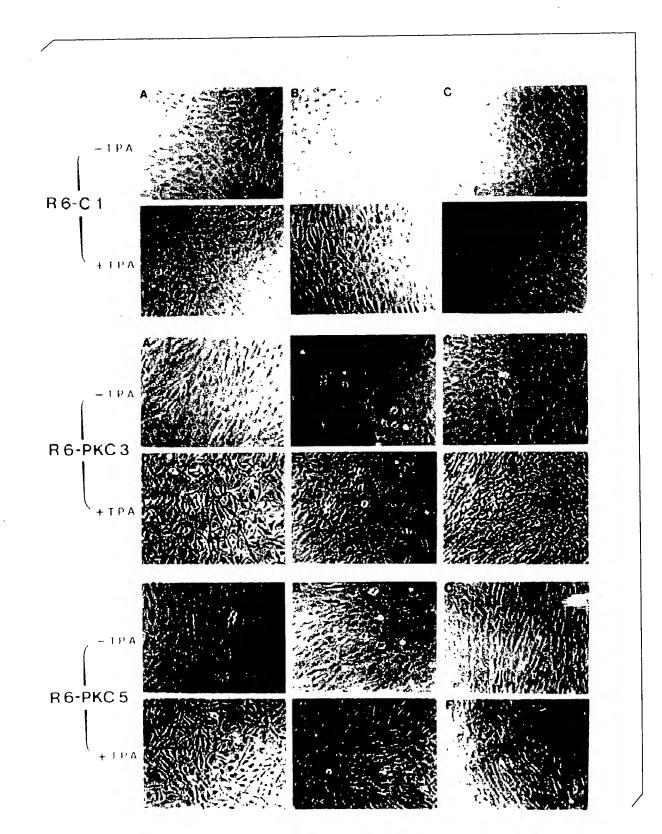


FIG. 4



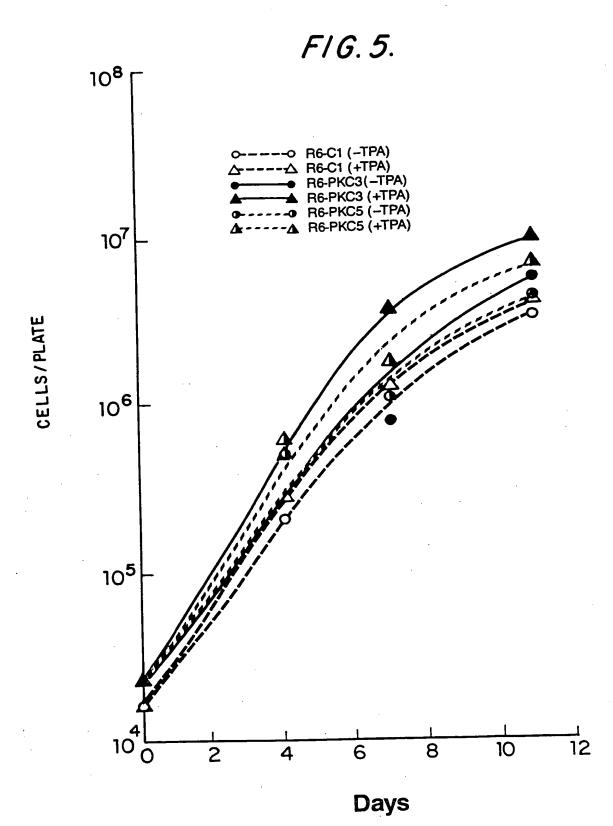
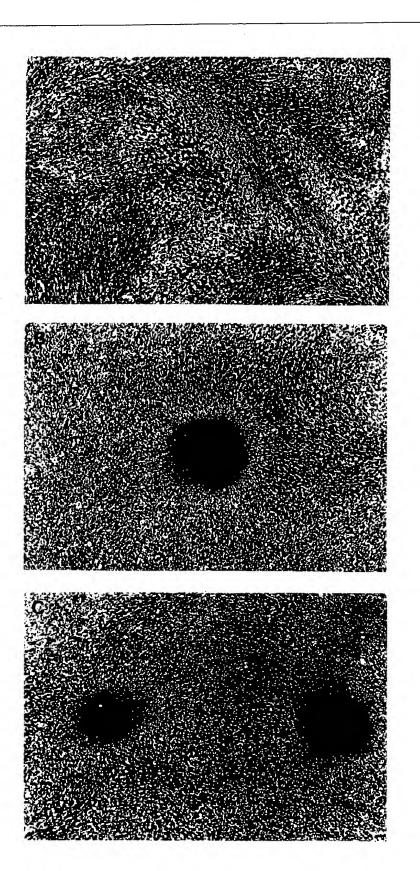


FIG. 6



**FIG. 7** 

